

VAUXHALL/OPEL

Carlton/Omega-A 2.0i CAT

1986 to 1994

Engine & Cooling

Fuel

Ignition

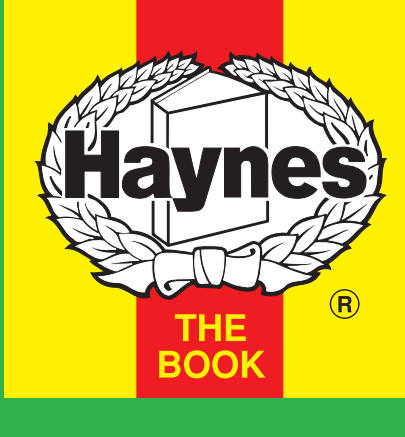
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

Engine and cooling system

Carlton/Omega-A 2.0i CAT

1986 to 1994

Type		C20NE SOHC. 85kW. US83 ¹
Capacity (cm ³) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	1.5
Oil temperature	°C	≥80
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	92 to 107
Radiator cap pressure	bar	1.2 to 1.3

Fuel system

Carlton/Omega-A 2.0i CAT

1986 to 1994

Idle speed - manual [auto]	rpm	720 to 880
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	≤0.4
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		ML4.1-Motronic. 90 ►: M1.5
Main jet / needle		_
Injection pressure	bar	2.5±0.2 ²
Pump pressure	bar	3.0±0.1 ³
Octane rating	RON	95[U]

Ignition system

Carlton/Omega-A 2.0i CAT

1986 to 1994

Type		DME Motronic
Ignition coil		Bosch 0 221 122 369
Primary resistance	ohms	0.72±0.04
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Bosch
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	8 to 12 BTDC @ idle N/A
V = Vacuum NV = No Vacuum		_
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	_
Spark plugs		Bosch/Champion
Type		WR8DC / RN7YC
Electrode gap	mm	0.70 to 0.80

Electrical system

Carlton/Omega-A 2.0i CAT

1986 to 1994

Battery	V / CC / RC	12 / 44Ah
Alternator voltage / full load current / engine rpm		13.8 to 14.8 / 55-90 / 2000
Starter motor current / voltage - cranking	A / V	75 / 11.5 (no load)
- locked	A / V	475 to 600 / 12

Running gear

Carlton/Omega-A 2.0i CAT

1986 to 1994

Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	7.0 with backing

Tyres		
Saloon	Size	185/70x14: 195/65x15
Estate / Van	Size	175x14: 185/70x14: 195/65x15
Pressure - front / rear - Saloon	bar	2.2 / 2.2
- Estate / Van	bar	2.0 / 2.2

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[0 to +20'] L
Camber		-1°55' to -15'
Castor		⁴
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	-0.5 to +5.5 ⁵
Camber		4D: -2°20' to -1°. 5D ⁶

Torque wrench settings

Carlton/Omega-A 2.0i CAT

1986 to 1994

Cylinder head - stage 1	Nm	25 N
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	+90°
- stage 4	Nm	+90°
Big-end bearings	Nm	35 + 45° to 60° N
Main bearings	Nm	50 + 40° to 50° N
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	65 + 30° to 45° ⁷
Front hubs	Nm	320
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	25

Capacities

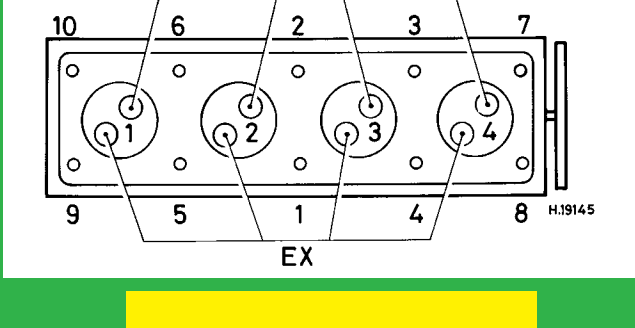
Carlton/Omega-A 2.0i CAT

1986 to 1994

Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	1.9
Automatic transmission - refill	litres	2.6
Final drive	litres	4D: 0.9. 5D: 1.1
Cooling system	litres	6.4
Fuel tank	litres	4D: 75. 5D: 70

Notes and Illustrations

- ¹C20NEJ. 73kW
- ²M1.5-Motronic: 1.8 to 2.2
- ³M1.5-Motronic: 2.5 to 3.0
- ⁴4D manual steering: +2° to 4°. PAS: +4°30' to 6°30'. 5D manual steering: +1°30' to 3°30'. PAS: +4° to 6°
- ⁵5D: 0 to +6.0
- ⁶-2°5' to -45'
- ⁷Use locking compound



1998 cm³, 8V